

Status of this application

Claims 1-13 are pending in this application, claim 1 being the sole independent claim. In the outstanding Office Action mailed on March 9, 2005, claims 1-4, 6, and 9 were finally rejected under 35 U.S.C. §102(e) as being anticipated by Krupa, U.S. Patent Application Publication No. 2002/0156811 (hereinafter "Krupa"). Claims 5, 7 and 10 were finally rejected under 35 U.S.C. §103(a) as being directed to subject matter deemed to be obvious in view of Krupa when considered with Lee et al., U.S. Patent Application Publication No. 2002/0169788 (hereinafter "Lee"). Claim 8 was rejected as being directed to subject matter deemed to be obvious in view of Krupa in view of Harless, U.S. Patent Application Publication No. 2003/0005410 (hereinafter "Harless").

This response amends independent claim 1 to more clearly distinguish the invention from the cited art, and amends claim 8 so that it better corresponds to the antecedents in claim 1 as amended.

Krupa does not disclose applicants' invention as now claimed.

Claim 1, the only independent claim, has been amended by this response to clarify the distinction between the "XML skeleton" used in applicants' invention from the in-memory DOM tree disclosed by Krupa.

Applicants' invention as claimed in independent claim 1 and its dependent claims 2-13 preserves the hierarchical structure of an XML document by first parsing the document to identify characters representing data values, removing at least some of these characters representing data values from the XML document and storing the remainder of the XML document in the relational database as an XML skeleton which defines the structure of the original XML document and which contains the same characters as the original XML document but with the characters representing data values omitted. Thereafter, the complete XML document is reconstructed by merging data from the relational database back into with the stored XML skeleton.

In the outstanding final rejection, the Examiner took the view that the in-memory DOM tree disclosed by Krupa was, an "XML skeleton" in the sense that the in-memory

tree retained the parent child relationships of the original XML documents and hence defined the structure of the document. Applicants have accordingly amended claim 1 to specifically recite that the XML skeleton as stored contains the same characters as the XML document but with the characters representing data values omitted.

Thus, independent claim 1 as amended even more clearly distinguishes over the system described by Krupa that uses a DOM or JDOM in-memory tree structure as a mechanism for accessing the different parts of an XML document so that these parts can be placed in a relational database. Krupa nowhere suggests, however, that the DOM or JDOM in-memory tree itself be placed in the database. Krupa saves the parent child relationships in the database, not by storing the in-memory tree in the database, but instead by traversing the parent child hierarchy and storing a compound name for each data item that includes the name of every parent element in the tree (e.g. "customer/name/pcdata"). See Krupa at [0028-31].

Thus, the in-memory tree of Krupa differs from the "web skeleton" claimed by applicants because the in-memory tree from which the data and data names are extracted is not itself stored in the database as claimed, and, neither the in-memory tree nor anything else described by Krupa is formed by removing at least some of said characters representing data values from the XML document and storing the remainder of the XML document in the relational database as an XML skeleton which defines the structure of said XML document and which contains the same characters as the XML document but with said characters representing data values omitted. These features are clearly recited in independent claim 1 as amended.

It is therefore believed that claim 1 and its dependent claims 2-13 as now presented set forth subject matter that is clearly distinguishable from and represents invention over Krupa.

The supporting references, Lee and Harless, cited by the Examiner in support of the obviousness rejection of dependent claims 5, 7, 8 and 10 likewise do not disclose or suggest the creation and storage of a skeleton document formed by removing characters representing selected data elements from an original document and storing that skeleton document which contains the same characters as the as the XML document but with the characters representing data values removed.

Conclusion

Allowance of claims 1-13 is requested. This response is being filed with a Request for Continued Examination in order to permit the Examiner to consider the issues presented by the amended claims.

Respectfully submitted,



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Certificate of Transmission under 37 CFR 1.8

I hereby certify that this *Amendment and an accompanying Request for Continued Examination, a Petition for an Extension of Time, and a credit card payment form* are being transmitted by facsimile to the central facsimile number of the U.S. Patent and Trademark Office, (571) 273-8300, on August 8, 2005.

Dated: August 8, 2004

Signature



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